CLAIM LISTING:

Claims 1-4 (canceled)

5. (original) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure including therein at least one silicon oxide film and one silicon nitride film,

characterized in that said silicon oxide film is formed by a process comprising the steps of:

supplying a gas containing oxygen and a gas predominantly of Kr into a processing chamber, and

exciting plasma in said processing chamber by a microwave.

6. (original) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure in which a first silicon nitride film, a first silicon oxide film, a second silicon nitride film and a second silicon oxide film are stacked consecutively, said first electrode having a polysilicon surface,

characterized in that said first and second silicon oxide films are formed by a process comprising the steps of:

introducing a gas containing oxygen and a gas predominantly of Kr into a processing chamber, and

exciting plasma in said processing chamber by a microwave.

7. (original) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure in which a first silicon oxide film, a silicon nitride film and a second silicon oxide film are stacked consecutively, said first electrode having a polysilicon surface,

characterized in that said first and second silicon oxide films are formed by a process comprising the steps of:

introducing a gas containing oxygen and a gas predominantly of Kr into a processing chamber, and

exciting plasma in said processing chamber by a microwave.

8. (currently amended) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with a inter-electrode insulation interposed therebetween, said inter-electrode insulation film having a two-layer structure in which a silicon oxide film and a silicon nitride film are stacked consecutively, said first electrode having a polysilicon surface,

characterized in that said silicon oxide [film] <u>films</u> are formed by a process comprising the steps of:

introducing a gas containing oxygen and a gas predominantly of Kr into a processing chamber, and

exciting plasma in said processing chamber by a microwave.

9. (original) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate , a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure including at least one silicon nitride film,

characterized in that said silicon oxide film is formed by a process comprising the step of:

exposing a silicon oxide film deposited by a CVD process to atomic state oxygen O* formed by microwave excitation of plasma in a mixed gas of an oxygen-containing gas and an inert gas predominantly of a Kr gas.

10. (original) A fabrication process of a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure in which a first silicon nitride film, a first silicon oxide film, a second silicon nitride film and a second silicon oxide film are stacked consecutively, said first electrode having a polysilicon surface,

characterized in that said first and second silicon oxide films are formed by a process comprising the step of:

exposing a silicon oxide film deposited by a CVD process to atomic state oxygen O* formed by exciting plasma in a mixed gas of a gas containing oxygen and a gas predominantly of a Kr gas, by a microwave.

11. (currently amended) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure in which a first silicon oxide film, a silicon nitride film and a second silicon oxide film are stacked consecutively, said first electrode having a polysilicon surface;

characterized in that said second silicon oxide film [are] is formed by a process comprising the step of:

exposing a silicon oxide film deposited by a CVD process to atomic state oxygen O* formed by exciting plasma in a mixed gas of a gas containing oxygen and a gas predominantly of a Kr gas by a microwave.

Claims 12-13 (canceled)

14. (currently amended) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode insulation film interposed therebetween, said inter-electrode insulation film having a stacked structure in which a first silicon oxide film, a

silicon nitride film and a second silicon oxide film are stacked consecutively, said first electrode having a polysilicon surface;

characterized in that said silicon oxide [film] films are formed by a process comprising the step of:

exposing a silicon oxide film deposited by a CVD process to atomic state oxygen O* formed by exciting plasma in a mixed gas of a gas containing oxygen and a gas predominantly of a Kr gas by a microwave.

Claims 15-19 (canceled)

20. (original) A method of fabricating a flash memory device, said flash memory device comprising a silicon substrate, a first electrode of polysilicon formed on said silicon substrate with an insulation film interposed therebetween, and a second electrode formed on said first electrode with an inter-electrode oxide film interposed therebetween,

characterized on that said inter-electrode oxide film is formed by a process comprising the steps of:

depositing a polysilicon film on said silicon substrate as said first electrode; and

exposing a surface of said polysilicon film to atomic state oxygen O* formed by exciting plasma in a mixed gas of a gas containing oxygen and an inert gas predominantly of a Kr gas by a microwave.

Claims 21-51 (canceled)